CLAIMS

1. A radio receiver operable in a zero-IF and a low-IF mode, comprising an input for a radio frequency signal, quadrature down-conversion means coupled to the input for translating the radio frequency signal to an intermediate frequency and for generating in-phase and quadrature versions of the intermediate frequency signal, complex filtering means for operating on the in-phase and quadrature signals to provide filtered in-phase and quadrature signals and first and second analogue-to-digital conversion means for digitising each of the in-phase and quadrature signals, wherein means responsive to the receiver operating in the low-IF mode are provided for disabling operation of one of the first and second analogue-to-digital conversion means, low-IF digital signal processing means are provided for operating on a single digitised signal to generate decoded digital output data in the low-IF mode and zero-IF digital signal processing means are provided for operating on in-phase and quadrature digitised signals to generate decoded digital output data in the zero-IF mode.

2. A receiver as claimed in claim 1, characterised in that the complex filtering means comprises a polyphase filter.

3. A receiver as claimed in claim 1, characterised in that the complex filtering means are passive.

4. A receiver as claimed in claim 1, characterised in that means responsive to the receiver operating in the zero-IF mode are provided for switching the complex filtering means out of the paths of the in-phase and quadrature signals.

5. A receiver as claimed in claim 1, characterised in that the analogue-to-digital conversion means comprises a sigma-delta analogue-to-digital converter.

6. A receiver as claimed in claim 1, characterised in that the analogue-to-digital conversion means are operable at a plurality of different clock speeds.

7. A receiver as claimed in claim 1, characterised in that the low-IF digital signal processing means includes derotation means for translating the digital in-phase and quadrature signals to baseband.

8. A receiver as claimed in claim 1, characterised in that the low-IF digital signal processing means includes signal generation means for operating on the digitised signal to generate digital in-phase and quadrature signals.

9. A receiver as claimed in claim 8, characterised in that the signal generation means comprises first and second low pass filters and in that the phase shift applied to signals passed through each of the filters differs by 90°.

10. A receiver as claimed in claim 9, characterised in that the filters have a linear-phase characteristic.

11. An integrated circuit comprising a radio receiver as claimed in claim 1.